

Listing of Claims

The following listing of claims replaces all prior versions and listings of claims in the application.

1. (Currently amended): A luminescent material for scintillators, comprising a single crystal of an Yb-containing mixed-crystal oxide which has a composition represented by either one of $R_3Al_5O_{12}$, $R_3Ga_5O_{12}$ and $Li_6R(BO_3)_3$, wherein R is a mixture of Yb and either one of Y, Gd and Lu, and said Yb as an element capable of forming an optically active state called CTS together with a neighboring negative ion adjacent thereto, wherein the molar ratio of either one of Y, Gd and Lu to Yb in said R satisfies the conditions expressed by the following formulas:

$$\underline{1.04x + 1.02y \leq 1.03;}$$

$$\underline{x + y = 1;}$$

$$\underline{0 < x < 1; \text{ and}}$$

$$\underline{0 < y < 1,}$$

wherein x is a molar ratio of Yb, and y is a molar ratio of either one of Y, Gd and Lu.

2. (Currently amended): A luminescent material for scintillators, comprising a single crystal of an Yb-containing mixed-crystal oxide which has a composition represented by either one of $Li_3LaR_2Ga_3O_{12}$, $LaR_2Ga_3O_{12}$ and $Gd_3R_2Ga_3O_{12}$, wherein R is a mixture of Yb and either one of Y, Gd and Lu, and said Yb as an element capable of forming an optically active state called CTS together with a neighboring negative ion adjacent thereto, wherein the molar ratio of either one of

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Y, Gd and Lu to Yb in said R satisfies the conditions expressed by the following formulas:

$$\underline{1.04x + 1.02y \leq 1.03;}$$

$$\underline{x + y = 1;}$$

$$\underline{0 < x < 1; \text{ and}}$$

$$\underline{0 < y < 1.}$$

wherein x is a molar ratio of Yb, and y is a molar ratio of either one of Y, Gd and Lu.

3. (Canceled):